

## PTFP DIGITAL TELEVISION LIST FY 2000 GRANT CYCLE

- Incorporating information provided by the PBS DTV Strategic Services Group -

### SECTION A. TRANSMISSION

#### ATSC DIGITAL TELEVISION EQUIPMENT

| Item Description   | Low VHF   | High VHF  | UHF 1          | UHF 2          | UHF 3     |
|--|-----------|-----------|----------------|----------------|-----------|
|  | 4 kW      | 8 kW      | 2.5 kW         | 15 kW          | 60 kW     |
| 1 Digital Television Transmitter with<br>combiners, bandpass filter, spare parts kit   | 600,000   | 731.500   | <b>369,400</b> | <b>519,000</b> | 1,006,500 |
| 2 Digital Television Broadcast Antenna<br>(Includes installation)  | 208,300   | 208.300   | 175.000        | 200.000        | 254,500   |
| 3 Transmission Line (1,500 ft) w/Installation<br>(VHF -- 3-1/8", UHF - 3-1/8" & 6-1/8")  | 120,000   | 120.000   | 120.000        | 240,000        | 240,000   |
| 4 Station ("dummy") load for ATSC or<br>NTSC TX  | 3,500     | 3.500     | 4.500          | 4.500          | 6.000     |
| 5 Tower, 1,500 ft, guyed with strobe lights<br>(65 lb wind load -- 1/2" ice)   | 1,800,000 | 1,800,000 | 1,800,000      | 1,800,000      | 1,800,000 |
| 6 Tower Foundation   | 200,000   | 200,000   | 200,000        | 200,000        | 200,000   |
| 7 Tower Installation   | 300,000   | 300,000   | 300,000        | 300,000        | 300,000   |
| 8 Test Equipment Package (RF & transport<br>stream)<br>ATSC Demodulator<br>w/video option \$65,000<br>4 Ch. MPEG analyzer \$55,000 | 120,000   | 120,000   | 120,000        | 120,000        | 120,000   |
| 9 Frequency Reference System   | 3,500     | 3,500     | 3,500          | 3,500          | 3,500     |
| 10 Audio-Video Monitoring<br>Package for studio site<br>(Includes DTV Demodulator)   | 20,000    | 20,000    | 20,000         | 20,000         | 20,000    |
| 11 Digital STL - Twin stream<br>(Hot standby, 500 ft line, 6 ft antennas)  | 150,000   | 150,000   | 150,000        | 150,000        | 150,000   |
| 1 la Digital Microwave Interconnection -<br>cost per hop<br>(500 ft line, 6 ft antennas)   | 70,000    | 70,000    | 70,000         | 70,000         | 70,000    |

|    |   |        |        |        |        |        |
|----|---|--------|--------|--------|--------|--------|
| 12 | STL Tower -- 100 ft. installed<br>(lighting as required)            | 47,000 | 47,000 | 47,000 | 47,000 | 47,000 |
| 13 | Remote Control System for DTV Transmitter                           | 25,000 | 25,000 | 25,000 | 35,000 | 35,000 |
| 14 | Transmission Line Gas and/or Dehydrator<br>System                   | 3,000  | 3,000  | 3,000  | 3,000  | 3,000  |
| 15 | Power Installation for Transmitter                                  | 10,000 | 20,000 | 10,000 | 20,000 | 20,000 |
| 16 | Power Regulation & Surge Suppression                                | 5,000  | 10,000 | 5,000  | 10,000 | 20,000 |
| 17 | Ducting and Forced Air System for TX Cooling                        | 10,000 | 25,000 | 10,000 | 25,000 | 25,000 |
| 18 | Installation Materials - Miscellaneous                              | 5,000  | 10,000 | 5,000  | 10,000 | 10,000 |
| 19 | Equipment Racks<br>(Includes side panels & doors)                   | 3,500  | 3,500  | 3,500  | 3,500  | 3,500  |
| 20 | RF Installation Parts<br>(Includes patch panel, elbows, couplers)   | 7,500  | 10,000 | 7,500  | 10,000 | 10,000 |
| 21 | RF Directional Couplers for Test Points<br>(For power measurements) | 7,500  | 10,000 | 7,500  | 10,000 | 10,000 |
| 22 | Proof-of-Performance Test per FCC                                   | 5,000  | 10,000 | 10,000 | 10,000 | 10,000 |
| 23 | RF Combiner for N+1 or N-1 installations                            | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |

#### **A. TRANSMISSION (Continued)**

#### **NTSC EQUIPMENT FOR DIGITAL READY STATIONS**

|    |   | <b>Low VHF High VHF</b> |              | <b>UHF</b>   |
|----|---|-------------------------|--------------|--------------|
|    |   | <b>30 kW</b>            | <b>45 kW</b> | <b>60 kW</b> |
| 24 | NTSC Transmitter w/diplexer, spare parts and<br>spare final tube(s) | 537,355                 | 727,105      | 812,314      |
| 25 | NTSC Television Broadcast Antenna<br>(Includes installation)        | 225,000                 | 250,000      | 300,000      |
| 26 | Transmission Line (1,000 Ft.)<br>(VHF- 3 1/8". UHF- waveguide)      | 58,320                  | 58,320       | 175,000      |
| 27 | Power Install/regulation/suppression                                | 50,000                  | 50,000       | 50,000       |

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|----|--|--------|--------|--------|
| 28 | Stereo and SAP generator and processor         | 24,500 | 24,500 | 24,500 |
| 29 | Multichannel audio modulation monitor          | 14,000 | 14,000 | 14,000 |
| 30 | Video processing amplifier                     | 6,500  | 6,500  | 6,500  |
| 31 | Waveform/Vectorscope /switcher                 | 10,500 | 10,500 | 10,500 |
| 32 | Demodulator w/down converter, antenna and line | 23,500 | 23,500 | 23,500 |

## SECTION B. MASTER CONTROL

### ATSC DIGITAL TELEVISION EQUIPMENT

These models provide for 1) single channel, standard definition (SD) simulcast per FCC requirements, and 2) 4-channel SD multicast.

Both models include pass-through of PBS DTV network programming.

|    |  | Model #1 - 1 Ch SD | Model #2 - 4 Ch Multicast |
|----|--|--------------------|---------------------------|
| 1  | Satellite Antenna for PBS DTV Feed             | 5,000              | 5,000                     |
| 2  | Satellite Demodulator for PBS Feed             | 7,500 (Quan 1)     | 30,000 (Quan 4)           |
| 3  | Single or Multichannel Server                  | 75,000 (Note 1)    | 150,000 (Note 2)          |
| 4  | Transport Stream/Routing Switching System      | 20,000 (Simple)    | 250,000 (Router)          |
| 5  | Identification System ("Bug") Inserter - Video | 5,000              | 20,000                    |
| 6  | Analog - Digital Converter                     | 10,000             | 40,000                    |
| 7  | ATSC Encoder - Standard Definition (SD)        | 35,000             | 140,000                   |
| 8  | Encoder Controller                             | 20,000             | 20,000                    |
| 9  | Noise Reducer                                  | 7,500              | 30,000                    |
| 10 | Data Multiplexing System                       | 20,000             | 20,000                    |
| 11 | Captioning System for ATSC                     | 10,000             | 40,000                    |
| 12 | PSIP Generator                                 | 5,000              | 25,000                    |
| 13 | Test and Monitoring System                     | 55,000             | 55,000                    |

(Off-air Receiver, Digital Test Equipment,  
Displays)

2 serial component measurement sets 17,000

Digital 16x9 line monitor 18,000

Off-air receiver 6,000

Terminal rack monitor and measurement set 14,000

|    |  |        |        |
|----|--|--------|--------|
| 14 | Master Control Accessories to Accommodate DTV<br>(Dist amps, monitors, patching, processors) | 20,000 | 25,000 |
|----|--|--------|--------|

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|----|---|--------|--------|
| 15 | Installation Materials for DTV Facilities<br>(Racks, consoles, power) | 15,000 | 20,000 |
|----|---|--------|--------|

### NTSC EQUIPMENT FOR DIGITAL READY STATIONS

|    |                               |        |        |
|----|-------------------------------|--------|--------|
| 16 | Master control video switcher | 75,000 | 75,000 |
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| 17 | Processing amplifier for NTSC | 8,500 | 8,500 |
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|----|--|--------|--------|
| 18 | 30 video distribution/SDI amps with rack frame and p/s | 20,000 | 20,000 |
|----|--|--------|--------|

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|----|--|--------|--------|
| 19 | 60 audio distribution amps with p/s and rack frame | 25,000 | 25,000 |
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| 20 | Dual Sync generator with changeover and pulse distribution | 20,000 | 20,000 |
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| 21 | NTSC off-air demodulator with antenna and line | 25,500 | 25,500 |
|----|--|--------|--------|

|    |                                  |       |       |
|----|----------------------------------|-------|-------|
| 22 | EAS receiver and encoder/decoder | 6,000 | 6,000 |
|----|----------------------------------|-------|-------|

|    |                                |       |       |
|----|--------------------------------|-------|-------|
| 23 | Component Waveform/Vectorscope | 8,500 | 8,500 |
|----|--------------------------------|-------|-------|

Note 1: Provides 24 hour rec/pb capacity

Note 2: PTFP currently limits this item to \$150,000 for basic one-channel at 96 hours or it can be reconfigured for multichannel use.